Master's thesis position in Pediatric Glioma Research

Topic: Model glioma tumorigenesis and decipher cell tumor cell state-of-origin
Group: Pediatric Glioma Research
Supervision: Prof. Dr. David Jones, Devishi Kesar, Maria-Luisa Wiesinger

Do you want to unravel the developmental state in which cells are particularly susceptible to oncogenic hits, resulting in the most common brain tumor in children?

Do you want to induce tumor-like outgrowth in cortical organoids and computationally analyze cell clusters using single-cell RNA-sequencing?

Then the Jones lab is waiting for you to join forces and shed light on the initiation of pediatric low-grade glioma!
You don't want to limit yourself to either cell culture work or computational analyses? This project has you covered.

As part of the master's thesis, you will generate hiPSC lines with inducible oncogene constructs, derive cortical organoids from them, and track tumor-like outgrowth over time. Moreover, you will perform single-cell RNA-sequencing of different conditions and compare them to a human developmental cell atlas to identify the developmental time window in which oncogenic hits are likely to occur.

We are looking for a student who has extensive hands-on experience in mammalian cell culture, with a strong emphasis on maintaining sterile and contamination-free techniques. If you've worked with stem cells or organoids before, that's highly desirable. No need to be an expert in R, we are happy to teach you all the basic coding skills required to analyze your single-cell data. Most importantly, you should be motivated and excited to drive a project with us.

Expected start: November 2025 (or as soon as possible)
Application by e-mail to both Devishi (devishi.kesar@kitz-heidelberg.de) and Maria-Luisa (maria-luisa.wiesinger@kitz-heidelberg.de)

We are looking forward to hearing from you!